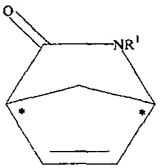
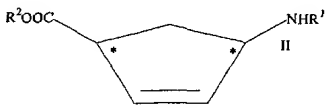
17. (New) A method for forming optically active compounds of the formulae



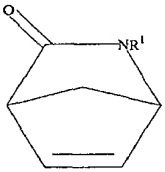
I



II

and

wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl and R^2 is a C_{1-10} alkyl, the method comprising treating a racemic lactam of the formula



III

with a hydrolase and an effective amount of a nucleophile, wherein said nucleophile is a C_{1-10} alcohol, and a base in a constant pH range to form the optically active compounds of formulae I and II.

18. (New) The method according to Claim 17, wherein a protease or lipase is used as the hydrolase.

19. (New) The method according to Claim 18, wherein a serine protease is used as the protease.

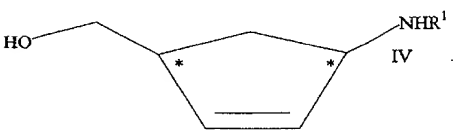
20. (New) The method according to Claim 19, wherein a subtilisin is used as the serine protease.

21. (New) The method according to Claim 17, wherein 2-acetyl-2-azabicyclo[2.2.1]hept-5-ene-3-one or 2-ethoxycarbonyl-2-azabicyclo[2.2.1]hept-5-ene-3-one is used as the racemic lactam of formula III.

22. (New) The method according to Claim 17, wherein the treatment of the racemic lactam is conducted in a C_{1-10} alcohol or in a mixture of a C_{1-10} alcohol with an aprotic solvent.

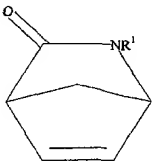
23. (New) The method according to Claim 17, wherein the treatment of the racemic lactam is conducted at a temperature of 10 to 60 °C.

24. (New) A method for the formation of optically active 1-amino-4-(hydroxymethyl)-2-cyclopentene derivatives of the formula



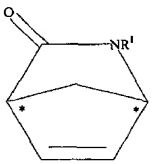
IV

wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl, the method comprising treating a racemic lactam of the formula



III

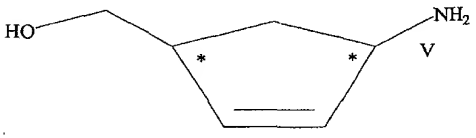
wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl with a hydrolase and an effective amount of a nucleophile, wherein said nucleophile is a C_{1-10} alcohol, and a base in a constant pH range to form the compound of the formula



I

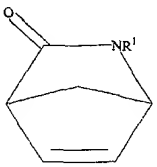
and wherein the compound of formula I is reduced to the compound of formula IV by treatment with a reducing agent.

25. (New) A method for the formation of (1R, 4S)-1-amino-4-(hydroxymethyl)-2-cyclopentene of the formula



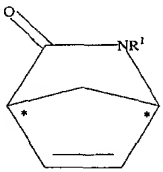
V

or its salts, the method comprising treating a racemic lactam of the formula



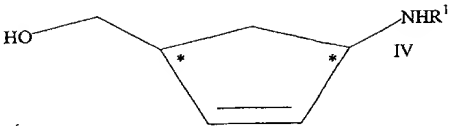
III

wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl with a hydrolase and an effective amount of a nucleophile and a base in a constant pH range to form the compound of the formula



I

wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl, wherein the compound of formula I is then reduced to the compound of formula



by treatment with a reducing agent, wherein R^1 is acyl, alkoxycarbonyl or aryloxycarbonyl, and wherein the compound of the formula IV is then hydrolyzed to the compound of formula V.

8 26 27. (New) The method of Claim 17, wherein each of the optically active compounds of formulae I and II are isolated after formation.

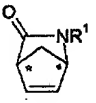
10 28. (New) The method of Claim 24, wherein each of the optically active 1-amino-4-(hydroxymethyl)-2-cyclopentene derivatives of formula IV are isolated after formation.

13 29. (New) The method of Claim 25, wherein the (1R, 4S)-1-amino-4-(hydroxymethyl)-2-cyclopentene of formula V is isolated after formation.

11 30. (New) The method of Claim 24, wherein the reducing agent is a metal hydride.

14 31. (New) The method of Claim 25, wherein the reducing agent is a metal hydride.

15 32. (New) A method for forming optically active compounds of the formulae

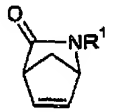


I and

II

wherein R^1 is C_{1-4} alkanoyl which is substituted with one or more halogen atoms, benzylcarbonyl, phenylcarbonyl, methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl,

butoxycarbonyl or phenyloxycarbonyl and R^2 is a hydrogen atom, the method comprising treating a racemic lactam of the formula



III

with a hydrolase and an effective amount of water as nucleophile and a base in a constant pH range to form the optically active compounds of the formulae I and II.

33. (New) The method according to Claim 32, wherein a protease or lipase is used as the hydrolase.

34. (New) The method according to Claim 33, wherein a serine protease is used as the protease.

35. (New) The method according to Claim 34, wherein a subtilisin is used as the serine protease.

36. (New) The method according to Claim 32, wherein 2-ethoxycarbonyl-2-azabicyclo[2.2.1]hept-5-ene-3-one is used as the racemic lactam of formula III.

37. (New) The method according to Claim 32, wherein treatment of the racemic lactam is conducted in water, a buffer solution or in a mixture of these with an aprotic solvent.